

3.3

Credit Cards and Store Promotions

Credit: an agreement in which a borrower receives something of value, and agrees to pay for it later.

Finance charge: the total amount of interest paid to borrow a sum of money.

EXPLORE THE MATH

“Buy Now, Pay Later!” “Sign up for our credit card and receive a free gift!” Promotions like these are used to attract customers and sell items that customers might not otherwise be able to afford, and to have people sign up for particular credit cards. When you make use of these promotions, you are relying on credit.

Credit is a type of loan in which a borrower receives something of value and agrees to pay the lender for it later.

Credit cards are issued by banks and other financial institutions, as well as by many department stores and gas companies. A credit card can be convenient, but if you do not pay the credit card balance by the due date, the credit card issuer charges interest on the remaining money you owe and on the cost of new purchases made before the next credit card statement date. This interest is called a **finance charge**. Credit card companies have different ways of calculating interest, so be sure you understand the terms of any card you may get.

Stores often offer promotions offering credit and allowing you to defer payment for months or years. These offers enable you to buy an item without paying the full amount immediately. In exchange, the stores often charge high interest rates on the purchase amounts when the payments are made.

Be sure you understand the conditions of a store promotion or credit card before you sign an agreement. Researching your credit options will help you to use credit effectively.

Evaluate the three credit card offers by filling out the chart below. Summarize your results by answering the questions that follow.

Comparing Credit Cards

Choosing a Credit Card: Comparing all the Options

Card Costs and Features	Card 1:	Card 2:	Card 3:
Interest Rate			
Balance Calculation Method			
Duration of Grace Period			
Annual Fee			
Late Fee			
Cash Advance Fee			
Over the Limit Fee			
Transaction Fee			
Minimum Finance Charge			
Any Special Offers?			

Are the offers alike or different? Explain your answer.

What hidden fees increase the cost of using credit?

Was the information easy to find and understand? Explain your answer.

Which credit card would you choose and why?

Cash advance: a withdrawal of cash from an ATM or bank teller charged to a credit card

-interest is usually calculated from the day of the withdrawal.

Example 1: Calculating interest on cash advance

- John charges a cash advance of \$500.00 to his credit card.
- appears on January 27 statement and he doesn't pay it
- next statement if February 27
- bank charges 18.00% annual interest for cash advances starting on the day of the withdrawal

Calculate the interest that John is charged for the January 12 cash advance.

Step 1: Calculate the number of days that interest was added on
(you may need a calendar for this)

number of days from Jan.12 to Feb.27?

Total = 47 days

Jan. 12 to Jan. 31 → 20 days

Feb. 1 to Feb. 27 → 27 days

Step 2: To use the formula $I = Prt$, find P, r, and t

$$\begin{aligned} I &= Prt \\ &= (500)(0.18)\left(\frac{47}{365}\right) \\ &= \$11.59 \end{aligned}$$

Step 3: Fill in the formula and solve for I

Example 2: Calculating credit card balances

- Jane is charged 19.50% per annum on her credit balances
- she uses her card (which had a zero balance) to purchase a stove for \$2100.36.
- next statement is September 30
- she pays only the minimum payment (5% of her balance)
- On Oct. 5, she makes a purchase of \$450.00 with her card
- How much money will Jane owe on October 7?

Step 1: First calculate the minimum monthly payment

$$2100.36 \times 0.05 = \$105.02$$

Step 2: Calculate the unpaid balance on September 30

$$2100.36 - 105.02 = \$1995.34$$

Step 3: Calculate the interest on the unpaid balance

$$I = Prt \\ = (1995.34)(0.195)\left(\frac{7}{365}\right) = \$7.46$$

Step 4: Since she didn't pay her balance in full, she will have to pay daily interest on her October purchase. Calculate this amount. (include the day of purchase)

$$I = Prt \\ = (450)(0.195)\left(\frac{3}{365}\right) \\ = \$0.72$$

Calculate the interest on the Oct. purchase.

Step 5: Combine the 2 interest amounts and the unpaid balance

$$\text{Total} = 1995.34 + 7.46 + 450 + 0.72 \\ = \$2453.52$$

ACTIVITY 3.7

UNDERSTANDING CREDIT CARD STATEMENTS

Pg. 119 - 120

Laurie works for a company that makes customized granite counters and floors in Moncton, NB. She recently travelled to Labrador to meet with the Torngait Ujaganniavingit Corporation, which mines blue eye stone from the Ten Mile Bay Quarry on Paul Island. When she travels, she usually puts her expenses on her credit card. Her credit card company sends her a statement each month with the following explanation of terms on the back of the statement:

- The previous balance is the amount you owed from the previous month.
- The payment is the amount you paid on the previous month's bill.
- The unpaid balance is how much you still owe from last month's bill.
- The interest is calculated on the unpaid balance for the number of days from the last statement to this current statement.
- The new balance is the amount you owe for the current month.
- The new balance is the unpaid balance plus interest plus purchases.
- The unpaid balance is the previous balance less any payments.
- The minimum payment is 5% of the new balance or \$10.00, whichever is greater.
- The credit available is the credit limit less the new balance.

Use Laurie's credit card statement to answer these questions.

1. What was the previous balance on Laurie's credit card?
2. The payment is shown as -\$1428.00. Why is it a negative number?
3. How was the value of \$2211.52 calculated for the purchases?
4. Did Laurie have to pay any interest in March? Explain.
5. How was the minimum payment calculated?
6. What payment will she have to make on or before April 28 so that she does not have to pay interest? Explain.
7. How is the available credit calculated?



Customer Name: Laurie Smith
 Card Number: 999 8888 7777 1234
 Statement Date: April 2, 2011
 Previous Statement: March 2, 2011

Transaction date	Posting date	Activity description	Amount (\$)
PREVIOUS STATEMENT BALANCE			\$1428.00
Mar 4	Mar 5	PAYMENT – THANK YOU	–\$1428.00
Mar 4	Mar 5	Flights Canada	\$1676.19
Mar 4	Mar 5	Sleep Well Hotel St. John	\$223.59
Mar 4	Mar 5	Sushi St. John	\$63.79
Mar 5	Mar 6	Gas Moncton	\$55.00
Apr 1	Apr 2	Best Save Foods Moncton	\$135.45
Apr 1	Apr 2	Quality Books	\$57.50

Payment information		Calculating your balance	
Minimum payment	\$110.58	Previous balance	\$1428.00
Payment due date	Apr 28	Payments & credits	–\$1428.00
Credit limit	\$5500.00	Purchases	\$2211.52
Available credit	\$3288.48	Cash advances	\$0.00
Annual interest rate	18.50%	Interest	\$0.00
		Other fees	\$0.00
		NEW BALANCE	\$2211.52

Example 3: Choosing the better option

Mi Jung wants to buy a sofa

- If she pays cash it will cost \$899.99 (no delivery charge)
- or choose one of the following two options:

Option 1:

- deferred payment plan of \$899.99, delivery charge of \$30 and administration fee of \$75 (both must be paid at time of sale).
- 2 years no interest

$$105 + 899.99 = \$1004.99$$

Option 2:

- use credit card to pay the \$899.99
- doesn't have to pay delivery charge or admin fee
- interest rate of 21% per annum
- will take 31 days to pay her credit card balance (which has previous balances on it)

$$\begin{aligned} I &= Prt \\ &= (899.99)(0.21)\left(\frac{31}{365}\right) \\ &= \$16.05 \\ &+ \\ &\quad \$899.99 \\ \hline & \$916.04 \end{aligned}$$

Pg. 124
1,3,7

Down payment: a partial payment sometimes required at the time of purchase

ACTIVITY 3.9

BUY NOW! NO DOWN PAYMENT REQUIRED!

Stores frequently advertise special deals to entice consumers to buy. Remember to always compare prices with other stores, and always read the fine print to see whether there are added costs such as delivery and administration charges. Assess the final cost of the item and your financial situation so you can make the decision that best meets your needs.

The sales promotions below are for the same flat-screen TV offered by three different stores.

1. What is the overall price for each option?
2. Which of these options has the best overall price?
3. What are the advantages and disadvantages of each option?

**Our Buy Now,
Pay Later Plan**

for \$1500.00 with no interest
payments for 1 year.

.....
*Delivery charge \$35.00 and
Administration fee of \$75.00 to be paid
at the time of sale. Interest of 12.00%
per annum will be charged for non-
payment 365 days after purchase.*

OPTION 2**Free Delivery!**

*with cash purchase
of \$1245.65.*

OPTION 1

Buy with our in-store loan
\$0 down payment
and 24 monthly
payments of \$70.00

.....
*Delivery charge of \$35.00 and an
administration fee of \$75.00 are
added to the purchase price and are
included in the monthly payments.*

OPTION 3

Monday, April 16th

- Next Test: Chapter 3 Test on Thursday, April 19th
- Next Assignment Due: Thursday, April 19th
*pass in by Wednesday for bonus points!!

Today:

- Check and go over Homework Pg. 124 #1, 3, and 7
- Finish Section 3.3
- Begin Section 3.4 (Notes/Examples/Practice questions)

****Assignment: Pg. 138 #1 to 10 (Must Show ALL work!!!)****

Answer Questions: Pg. 124-125 #1,2,3,5,7

BUILD YOUR SKILLS

1. Calculate the interest due on the following credit card balances and minimum payments (5.00% or \$10.00, whichever is greater).

a) Unpaid balance: \$345.67

Interest rate per annum: 20.00%

Time: 30 days

$$\begin{aligned} a) \quad I &= Prt \\ &= (345.67)(0.20)\left(\frac{30}{365}\right) \\ &= \$5.68 \end{aligned}$$

b) Unpaid balance: \$55.75

Interest rate per annum: 18.00%

Time: 31 days

$$\begin{aligned} b) \quad I &= Prt \\ &= (55.75)(0.18)\left(\frac{31}{365}\right) \\ &= \$0.85 \end{aligned}$$

2. Claudine is a teacher at New Brunswick's Eel Ground First Nation School. The school combines technology such as interactive whiteboards with traditional cultural teaching. Before working as a teacher, Claudine took a course on how to use technology in the classroom. She put the costs associated with the course on her credit card. She was charged \$16.22 interest on a credit card balance of \$1032.05 that she took 31 days to pay. What is the interest rate on her credit card per annum?

3. Sanaa had an unpaid balance on her credit card that has an interest rate of 21.50% per annum. It took her 19 days to pay, and she was charged \$7.75 interest. What was the unpaid balance on her card?


I

$$\frac{I}{rt} = \frac{Prt}{rt}$$

$$P = \frac{I}{rt} = \frac{7.75}{(0.215) \left(\frac{19}{365} \right)} = \frac{7.75}{0.01119...} = \$692.58$$

4. Phil received a credit card statement dated August 1, on which he owed \$505.50. He paid \$100.00 before the payment due date.
- a) He is charged interest at a rate of 18.90% on his unpaid balance. How much interest will he pay if he takes until August 21 to pay the balance and he makes no other purchases using the credit card?
 - b) If instead Phil makes one purchase of \$160.40 on August 16 and makes no other purchases that month, how much will he owe as of August 21?

5. On August 10, Sharon takes a cash advance of \$300.00 on her credit card. The withdrawal appears on her monthly statement issued August 28. Sharon does not pay off this amount by the due date shown on her statement. The next monthly statement is issued on September 28.
- a) For how many days is interest calculated?
 - b) If Sharon's bank charges 25.50% annual interest for cash withdrawals, starting on the day of the withdrawal, what will she be charged for the August 10 withdrawal?
 - c) What is the actual cost of the cash withdrawal, including interest, if she pays for the purchase by her September statement's due date?

6. Brian wants to purchase a new refrigerator. A store offers a deferred payment plan of \$1099.99 with a delivery charge of \$40.00 and an administration charge of \$60.00, both to be paid at the time of sale. He has two years to pay for his purchase without any interest accruing. If the cash price of the fridge is \$729.99 plus the delivery charge, how much interest is he actually paying with the deferred payment plan?
- 

7. Jack is buying a new hybrid bicycle for commuting to work and bike touring. He has three payment options.

Option 1: Pay cash. The bicycle costs \$895.99 plus 12% tax

$$895.99 \times 0.12 = 107.52$$

Option 2: Use the store's payment plan of 6 monthly payments of \$190.00 (including tax).

$$190.00 \times 6 = \$1140$$

$$895.99 + 107.52 = \$1003.51$$

Option 3: Pay using a cash advance on his credit card. He would be charged interest at an annual rate of 19.5%, and he expects that it would take him 15 days to pay his credit card balance.

$$I = Prt = (895.99)(0.195)\left(\frac{15}{365}\right)$$

Calculate the cost of the bicycle using each of the payment options. Which option would you recommend Jack choose?

Option 3

$$895.99 + 7.18 = \$903.17$$